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ORIGINAL DEPARTMENT.

LECTURE.

ON FIBROID UTERINE TUMORS.

BY DR. R. S. SUTTON,
Of Pittsburg, Pa.

Delivered at Passavant's Hospital, October 5, 1880.

GENTLEMEN—You will probably remember Mrs. O., the patient who came before you a year ago, having a fibroid tumor, located in the wall of the uterus on the right side. She was taught the proper method of using hot vaginal douches and put upon a combination of fluid extract of ergot and muriate of ammonia, and sent home. Under the care of Dr. O'Connor she has followed out faithfully this treatment. She was readmitted by request of Dr. O'Connor a few days ago. An examination reveals the fact that the tumor can no longer be found. This is unexpected, but these tumors do occasionally disappear, even without treatment, and this is the second case in which I have seen the tumor disappear while the patient was taking this combination.

As this is the only patient I have to bring before you to-day, we will spend the remainder of the hour talking of fibroid tumors as found in or attached to the uterus. The round, hard fibroid, not the fibro-cystic variety, which we may take up again, will be our topic. On this plate I show you a number of fibroid tumors, all of which have been removed from the uterus. This one was sub-peritoneal; it has undergone cretaceous degeneration, was firmly fixed low in the pelvis, and completely disabled the woman, from pressure on the sacral plexus, and was constantly exciting attacks of localized peritonitis. It was removed, some of you will remember, through the posterior vaginal wall. This one was interstitial, and was removed post-mortem through the vagina. These two are of the submucous variety, and were successfully removed several years ago. This one is the typical fibroid polypus, large as a turkey egg, and showing the point of attachment of the pedicle, which a few days ago I severed with the wire ecraseur. The patient from whom this was removed is already running about and is very well.

This division of fibroids is, of course, arbitrary, for all have the same structure, but it is, for the purpose of teaching and really understanding, convenient to thus divide them. These tumors develop by a single nucleus in the wall of the uterus, and are, by the contractions of the organ, forced either toward the covering membrane or the lining membrane of the organ. In either case they may or may not become pedunculated. If the growth is sub-peritoneal and not disturbing the patient, it is the part of wisdom to let it alone. If it be distinctly pedunculated and there be good ground for its removal, you need not hesitate. Under carbolic spray, after the manner of Mr. Lister, the abdomen may safely be opened and the pedicle may be dealt with in accordance with our knowledge of dealing with the pedicle of ovarian cysts. But if the tumor be sessile, a portion or all of the uterus above the vaginal attachment may have to be removed. Such a surgical procedure requires the utmost necessity and the most profound hesitation. If the tumor be interstitial or submucous, it may be removed by dilating the cervix and cutting down directly upon the tumor, laying open its capsule. If enucleation be found difficult it may be expelled by full doses of ergot. Sub-

peritoneal fibroids are rarely accompanied by hemorrhage, but the uterus often becomes very deep. To condense the organ and to cut off the blood supply to the tumor, there is nothing better than subcutaneous injections of ergot or ergotine, both of which I have used with most excellent results and without producing small abscess more than once in a hundred injections.

Sometimes a sub-peritoneal fibroid falls into the pelvis and retroverts the uterus and makes locomotion difficult. If it be pedunculated it should be removed, but if the patient will not submit to this you may put her in the genu-pectoral position and push the growth up into the abdominal cavity, thus relieving the pressure on nerves, rectum and bladder, and if the patient can wear an instrument, try to sustain it there. In such a case, after the tumor and uterus are elevated, a copious douche of hot water will contract the vessels and set the circulation in the pelvis right again. You may think such a case not likely to occur, but I have one. For eight years I have never failed for a single day, when in the city, to elevate the tumor and to attempt its support with a pledget of cotton saturated with glycerine. This patient will not submit to an operation because I keep her too comfortable.

If hemorrhage is a prominent symptom in a case of uterine fibroid, you may depend upon it the growth is in the wall of the uterus and likely very close to the lining membrane of the uterus. How are you to manage it? My friend, Prof. Byford, of Chicago, would give full doses of ergot several times a day, and adhere to it until the uterus either expelled it or caused its absorption by pressure. He has been very successful, but the plan has always struck me as not entirely the safest one we may adopt. Dr. Meadows, of London, in order to reach these intra-uterine growths, divided the cervix with scissors, and a week later dilated the weakened cervix, split the capsule of the growth and enucleated it on the spot, or gave ergot for its expulsion. Sponge tents are employed to dilate the cervix; this plan I have tried, and although I got the tumor out, I got also a pelvic abscess for my reward. Sponge tents are dangerous implements and should be used with caution. There are many dilators; that of Dr. Sims, which dilates to the size of a quarter dollar, is a good one; further dilatation may be effected with any of the several instruments which depend upon the expansive force of water for their merit. To enucleate the growth after dilatation is effected, the finger nail is often sufficient. Dr. Thomas has devised a serrated scoop for the purpose. A stout tenaculum, or the double and guarded tenaculum of Dr. Sims, may be used to drag it from its bed.

If the tumor be intra-uterine and pedunculated —viz: a uterine fibroid polypus—it is more easily dealt with. Having dilated the cervix, with a stout pair of volsella forceps you may twist it off, or you may pass over it the wire of the ecraseur and sever its pedicle and pull it through the cervix with the same forceps. If the wire once passes the equator of the tumor, as you tighten it it will slip down on to the pedicle. Beyond the medical and surgical treatment alluded to you may be required to arrest serious hemorrhage in these cases. The best hæmostatic is removal of the growth or division of its capsule if the former is impossible. But if you can do neither, ergot, by the mouth or rectum, or better, subcutaneously, will be your first prescription. If the uterine cavity is deep and the cervical canal patulous, you may inject directly into the uterus a fluidrachm of tincture of iodine or persulphate of iron; or a tent may be passed into the cervix, or enough of them to fill it. Then a copious hot water douche may be instituted and followed with the tampon. But let us always remember when a fibroid tumor is producing no special discomfort to let it alone.

Communications.

HOW SHALL WE INTERPRET THE DEVIATIONS OF THE HEAD OF THE INCURABLE EPILEPTIC?

BY J. S. WIGHT, M. D.,

Professor of Surgery at the Long Island College Hospital.

In the *Medical Gazette*, August 14, 1880, appeared an article by me on the Deviations of the Heads of Confirmed Inebriates and Incurable Epileptics, showing the possibility of an epileptic being the offspring of an inebriate. My object in that article was to find some basis for the assertion that inebriety is a disease. That the brain of the confirmed inebriate deviates from the standard brain appears to be a fact, from the considerations then brought forward, and the inference was that a deviated brain would manifest a deviated function; and it may be assumed that deviations of function and structure are the antecedents or concomitants of disease. *Hence, confirmed inebriety is a disease.*

The same line of reasoning was pursued in regard to epilepsy. The conclusion that epilepsy is a disease must be admitted by all. Yet the hereditary connection between inebriety and

epilepsy might not be so apparent, but the facts pointed very strongly in that direction; indeed, they did not seem to admit of any other interpretation. And in addition to what was then said the following may now be stated: Alcohol disturbs the coördination of the muscles by interfering with the nerve cells that coördinate the muscles. These nerve cells are supposed to be in the cerebellum. It appears, from our measurements previously recorded, that the region of the cerebellum in the confirmed epileptic is smaller than normal, and that this same region in the confirmed inebriate is somewhat smaller than normal. Now, it would seem to be a reasonable thing to say that the disturbance from a long use of alcohol in the cells of coördination might seriously interfere with a normal heredity of the cells; at any rate, two facts stand in such relation as to lead us to believe that one is the cause of the other: (1) The disturbance of the nerve cells of coördination takes place in the parent, and (2) A diminution of the space occupied by these cells is found in the offspring. This conclusion finds some confirmation (1) from my recorded measurement of heads, and (2) from the fact that the deviated brain of an epileptic often descends from the deviated brain of an inebriate.

The closing paragraph of the article in the *Medical Gazette* reads as follows:—

"In fine, this is not the place to point out the relations of the above facts to the facts of the localization of the functions of the cortex cerebri."

Now, it has seemed to me desirable to say a few additional words on the deviations of the epileptic brain and cortical localizations. In the first place, the following general statement may be made: The two zones of the head on each side of the middle arch and between the frontal and superior arches cover a relatively greater volume of brain in the case of an epileptic than in the case of an inebriate; also a relatively greater volume of brain in the case of an inebriate than in that of the normal individual. The deficiencies in the volumes of the brain covered by the posterior arch in the case of an epileptic have already been mentioned. In the second place another general statement may be made, as follows: That part of the brain covered by the zones near the middle arch contains many of the cortical centres of the muscular system. In the epileptic these zones are relatively large. Hence it must be reasonably inferred that the cortical centres of the muscular system are unduly developed in the epileptic brain.

In this connection it is desirable to introduce some paragraphs from a paper read by me before the King's County Medical Society in 1878:—

"In measuring *skulls* and *heads*, I have made use of the following method—namely: Each mastoid process is made a centre of departure; and the point assumed is at the middle of the surface of the mastoid process, just back of the external meatus auditorius, ordinarily from half an inch to an inch above the mastoid extremity. This point is located nearly in a line with the base of the cerebrum, but it falls somewhat below the insertion of the tentorium; so that some of the cerebellum may rise above this *centre point*, and some of the middle cerebral lobe may fall below a line going from it to the supra-orbital ridge. This point is a mark that can be found at all times.

"The measurements of skulls and heads are made in the following directions from one mastoid centre point to the other:

"(1) An anterior arch just above the supra-orbital ridge.

"(2) A frontal arch over the frontal eminences.

"(3) A middle arch nearly over the coronal suture. In better-developed skulls and heads, the coronal suture is further forward; in less-developed skulls and heads the coronal suture is further backward.

"(4) A superior arch, nearly over the vertex, and about parallel with the axis of the foramen magnum.

"(5) A posterior arch over the occipital protuberance, nearly on a line with the insertion of the tentorium. These are the inter-mastoid arches.

"Also determine—

"(6) A diametrical base line from one mastoid point to the other.

"(7) The greatest transverse diameter.

"(8) The greatest antero-posterior diameter—leaving out the frontal sinuses.

"(9) The greatest antero-posterior circumference—leaving out the frontal sinuses, and measuring somewhat above the occipital protuberance.

"(10) The masto-frontal angle, which is included between the planes of the anterior and superior arches."

From these paragraphs it can be seen where the zones are which the frontal and superior arches limit and which are on each side of the middle arch.

Hence, in the next place, our reasoning would run in the following line: (1) In the standard

conditions of the brain the discharging or motor centres of the cortex operate and coöperate on the muscles, under the orderly direction of the coördinating cells of the cerebellum. In other words, the motor centres and the coördinating centres are so adjusted to each other as to carry out their normal functions. The work of the nerve cells is properly and regularly performed. (2) In the deviated conditions of the epileptic brain, the discharging, or motor centres of the cortex, being relatively large, operate and co-operate with extraordinary energy on the muscles, under the disorderly direction of the coördinating cells of the cerebellum, which are apparently fewer and weaker on account of hereditary influences. The motor centres and the coördinating centres are not normally adjusted. The nervo-muscular apparatus must not only have a coördinator, but the coördinator must be adequate to perform its true work.

And now it may be added, that the temporo-sphenoidal parts of the brain are also covered to some extent by the zones in the vicinity of the middle arch, and, as has already been shown, this region is relatively of large size, and it is very probable that the temporo-sphenoidal parts of the brain are abnormally large, as well as the motor parts above designated. If this be admitted, then we may bring forward another point of importance in this obscure subject. I refer to what Ferrier says in regard to lesions of the temporo-parietal region: "It has, I think, been shown conclusively, that experimental lesions of the cortex in this region in the lower animals—a region in which I claim to have demonstrated the existence of individually differentiated centres of special sense—are capable of producing impairment or paralysis of sensation on the opposite side of the body."

Now let us admit that the cortical centres of sensation are located in this temporo-parietal region. Then, as before stated, in the incurable epileptic, as shown by our measurements, these centres must be relatively large. Sensation, sense, and voluntary motion are sequentially related. And if the cortical centres of sensation are large and active as well as the cortical centres of motion, then it must happen that the exalted activity of the sensation cells would tend to augment the activity of the motor-cells. It is now competent for us to look still deeper into the process of coördination—and we may do so on the basis of the following suppositions:—

1. It is perfectly plain, if there are no centres of motion, there can be no motion.

2. It is also perfectly plain, if there are no centres of sensation, there can be no sensation.

3. It is true that sensation is the antecedent of sense, and that sense is the antecedent of motion.

And then we may ask the questions: Where does coördination begin? 1. In the motor acts? 2. In the sense? 3. In the sensation? May we not rather say, that coördination follows in the wake of the entire process of sensation, sense, and motion? And may we not also say, that motions are coördinated, because knowledge and impressions are coördinated?

From what has thus far been said, it may be understood how some disturbance somewhere in these three steps of intellectual (?) activity may eventuate in some special motor manifestation. 1. Let there be an undue irritation of the sensation-cells, and the effect may be an epileptic fit. 2. Let there be an undue discharge from the motor-cells, and the effect may also be an epileptic fit. 3. Let there be an undue action of both the sensation-cells and the motor-cells of the cortex cerebri, and the effect may be an epileptic fit. And these results are no doubt apt to follow, when the motor and sensation regions of the cortex cerebri are relatively developed in excess, and when the region of coördination is defective in development.

If our reasoning rests on a basis of facts it must agree with the general fact, that an irritative disturbance set up at many points outside of the motor centres may produce an epileptic fit; and such is the case in more than half the cases of epilepsy, as is shown by the various auræ affecting the patients. In this respect the view proposed does not disagree with the facts. To say that the eccentric point of disturbance is the cause of the fit, even though the removal of such disturbance arrests the fits in the future, cannot always give us the entire truth; for we overlook the deviations that may possibly be found in the cortex cerebri; and we can bear in mind that, if the cortical deviations were absent, the local disturbance might in no wise be anything more than a mere local disturbance. So that if we have the proper deviations of the cortex cerebri, a great variety of local disturbances may from time to time throw the machinery of sensation, sense and motion into spasmodic disorder.

Let it also be said that we do not exclude from this view of the subject that more anterior part of the brain which appears to be more especially employed as a higher intellectual centre. It is no doubt true that an irritation may begin there which may cause disturbance in the motor cen-

tres of the cortex and eventuate in epilepsy. The emotions of the intellect have a potential influence on the nervo-muscular system, including the blood vessels. The emotions of the intellect may also have a potential influence on the cells of coördination—deranging the coördinating powers themselves.

It is not my object now to go into this subject further than in the most general way to draw attention to the facts, that the brain of an incurable epileptic is a deviation from the standard brain, and that this deviation is hereditary, and that it often has its root in the brain of an inebriate parent, and that this hereditary deviation is a diseased condition, which is in some way connected with epilepsy, and that this deviation of organization is the reason why some cases of epilepsy are incurable, and that if we should meet with a head deviating, as the heads of the forty incurable epileptics measured by me were found to deviate, and its possessor having epilepsy, we could quite surely conclude, that the case would be incurable. The facts are, that an epileptic may come from an inebriate, and that the motor area of the cortex—and may be the sensory area—are relatively of large size, and that the posterior part of the head is deficient in size.

In fine, I may close these remarks by a paragraph taken from my previous paper:—

"Looking upon certain individuals as having heads deviating from the standard of volume and conformation, and finding that they are not adjusted to the conditions in which they live, and that they exhibit abnormal functional manifestations, and seeing that the influences of disease and injury augment their deviations: In a given case of injury or disease, we may have, in the deviation of the volume and conformation of the brain, an important indication as to what the clinical history may be, not only immediately, but during the rest of the life of the individual."

HYPOSULPHITE OF SODA IN THE TREATMENT OF DIPHTHERIA.

BY EDWIN BURD, M.D.,
Of Lisbon, Iowa.

About three years ago, while devoting some time to the macroscopic and microscopic investigation of the pathology and pathological anatomy of the prevalent and fatal disease, among some popularly termed "hog cholera," my attention was called to the reputed good effects of the hyposulphite of soda as a prophylactic and curative agent in that disease.

Bacteria being the supposed *cause* of the disease, and the hyposulphite of soda being efficacious in its prevention when properly used, as well as curative in many cases when given in time, led me to reason as follows: Diphtheria is supposed to be caused by bacteria, probably of a different kind from those giving origin to cholera in swine, yet bacteria nevertheless; and as sulphur is destructive to both animal and vegetable life, its use in diphtheria should give good results; and further, as the hyposulphite of soda seemed to give better results in swine than sulphur, I concluded to test the matter in diphtheria, should any cases present themselves for treatment. I called the attention of my friend Dr. J. M. Armstrong, a physician of large experience, to my theories, and he gave them his unqualified approval, and proposed to give the plan a trial in the next case.

My first case was my only son, a little boy five years of age, of delicate constitution, slight in build, who had suffered in infancy from some obscure cerebro-spinal affection, and later from vesical calculus, and consequently had very poor chances in a contest with so dreadful a destroyer. I had the advice and assistance of Drs. J M. Armstrong, W. O. Smith and Geo. Fletcher, of Lisbon, and H. Ristine, of Cedar Rapids. In my state of nervous anxiety and dread of losing my little boy, my theoretical plan of treatment never once entered my mind. The case was of the naso-pharyngo-laryngeal variety, with the urine sixty per cent. in volume, albuminous. On the tenth day of the disease (September 23d, 1879), Drs. H. Ristine and Son, of Cedar Rapids, assisted by Drs. Armstrong, Fletcher and Smith, of Lisbon, performed tracheotomy, which gave the poor little fellow great relief. Very little blood was lost during the operation, and in an hour afterward he seemed quite cheerful, but in a few hours emphysema of the pericardium took place, greatly embarrassing the heart in its action, and twenty-six hours after the operation the little sufferer quietly ceased to breathe.

I write so fully of this case to convince my readers, that I am writing of *diphtheria*, and not of follicular pharyngitis. My only regrets now are, that I did not think of and try my treatment in the case.

About this time, or shortly afterward, my friend, Dr. Armstrong, had a little patient die of the pharyngo-laryngeal variety of the disease. In a short time Drs. George Fletcher and W. O. Smith lost a case, of the naso-pharyngeal variety. In all of these cases, as well as in some who did not die the ordinary plan of treatment, as laid

down by the latest and best authorities, was used. Dr. Armstrong had forgotten the plan of treatment I had laid down, until I called his attention to it, after my little boy's death. He then immediately put it into practice, and has since lost no more cases. He is very enthusiastic over the results. I have used it in eight cases, with flattering results, all of them rapidly recovering.

My plan of treatment is as follows:—

℞. Sodæ hyposulphis, ℈ viij
Quiniæ sulphatis, ʒ ss
Spiritus frumenti, f. ʒ iv. M.

Sig.—For a child five years of age, one teaspoonful every four hours, day and night.

℞. Potassæ chloratis, ʒ ij
Tr. ferri chloridi, f. ʒ ij
Syr. simplicis, f. ʒ iv. M.

Sig.—One teaspoonful every four hours, day and night.

Insufflations of sulphur to be used several times a day. Food is urged upon the little patients in as large quantities as can be digested.

In all cases where the above treatment has been strictly carried out from the start, the result has been surprising. The spread of the exudation is at once arrested, and prostration does not ensue. The fetor of the breath also soon leaves, and the patient soon becomes bright and cheerful. If applied as soon as the first signs of exudation appear, the whole process seems to end right here, and in a few days the patient is well, with no unpleasant sequelæ.

I would urge upon the profession a *thorough trial* of the above plan of treatment, believing that, *if given in time*, it will cure all cases. It ought to prove a good prophylactic also.

CARCINOMATOUS DISEASE OF THE UTERUS—PREGNANCY—10½ MONTHS' TERM—DEATH.

BY I. N. SNIVELY, M. D.,
Of Waynesboro, Pa.

October 19th, 18—, I was called to see Mrs. F., wife of a farmer, aged forty-five, pregnant with her thirteenth child; had her menses the last time the middle of February, and felt first movements of child early in July; lost some little blood per vagina occasionally; suffered great pain in the region of the uterus and in the back; felt entirely different from her former pregnancies, which made her apprehensive that something terrible would befall her; had a discharge per vagina, which she thought was of a leucorrhœal character, from which she felt weakened. Upon examination I found the cervix and os uteri of an enormous size and of cartilaginous and scirrhous hardness, with an irregular and indented surface. The os presented a funnel-shaped cavity which could be entered to the depth of two inches with the index finger. There was a sanious discharge from this ulcerated surface. I was satisfied, from the unyielding nature of this abnormal tissue, sufficient dilatation of the os to allow the expulsion of the contents of the uterus was impossible, without rupturing this organ or the use of the knife. I placed my patient on general and local treatment.

November 6th. Found her stronger—her general condition improved and her local suffering in a measure alleviated. The os continued in the same condition. She expected her confinement the middle of this month. December 1st. Condition the same. December 17th. The same hard, unyielding tissue continues.

January 3d, I was summoned to her bedside. She had slight pains at irregular intervals all night. I found her moving through the house and suffering very little pain, the os making slight efforts at dilatation, but the same unyielding hardness continues. Her general condition was better, but the ichorous discharge per vagina continued. Auscultation revealed the placental souffle and beating of the fœtal heart.

January 4th. I found my patient sitting up, but her countenance changed. Her suffering was very great. She had a chill during the night. Now I could not hear any sounds within the uterus. The position of the child was apparently changed, and she complained of a sense of coldness and weight about her womb. I was satisfied the child was dead. The scirrhous feel of the os continued the same. Her appetite was gone and she complained of great discomfort, her skin assuming a yellow hue. I ordered a gentle purgative. Evening: Her bowels having been moved, I ordered a dose of morphia.

January 5th. My patient slept some during the night. This morning she showed me a viscid discharge she passed per vagina, which I found upon examination to be meconium. There was a breech presentation. She was unable to void her urine, which I drew away with the catheter.

She now suffered great pain about the os, which yielded, in a measure, after the free use of belladonna ointment.

January 6th. I found her very much in the same condition.

January 7th. In the morning I found her suffering with a violent chill which lasted over an hour. After reaction was established her pulse ran up to 170 per minute. I prescribed the usual

sedatives and made her as comfortable as possible. I called the oldest and most experienced physician in counsel, who confirmed my diagnosis.

Evening—Pulse less frequent and no uterine action.

January 8th, 9 A. M.—The generation of gases within the uterus has greatly distended the abdomen. Occasionally gas escaping per vagina from the decomposing child imprisoned within the rigid and diseased walls of the womb.

Her pupils became somewhat contracted, respiration became slow, and the pulse increased in frequency and coma supervened and speedily closed the scene.

She died at 2 P. M., in a comatose condition. An examination revealed a carcinomatous degeneration of not only the os and cervix uteri, but of the walls of this organ.

It is most unfortunate, yet too true, that pregnancy will take place when the uterus is affected with cancerous disease, and the physiological enlargement of this organ during the period of gestation facilitates a corresponding rapidity of this malignant disease.

Waynesboro, Franklin Co., Pa., Oct. 30, 1880.

Hospital Reports.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. R. J. LEVIS.

Reported for the Medical and Surgical Reporter, by Geo. F. Souwers, M. D.

Fracture of the Fibula.

There are, perhaps, in the wide range of surgery, no injuries that you will be so frequently called upon to treat as fractures of the different bones of the body, more especially of the extremities, and I therefore bring before my classes as great a number and variety of these cases as the wards of this hospital will furnish. In pursuance of this plan, I shall this morning exhibit to you and make some remarks upon a case of fracture of the fibula.

There is about a fracture of the fibula a certain amount of deceptiveness that is apt to throw one off his guard. When the tibia remains intact the fracture in the fibula is apt to be overlooked, but by observing a procedure of which I shall speak to you later, you need never fall into error. If you ask me does not such a fracture immediately disable a man and interfere with his locomotion? I answer decidedly that it does not; very frequently we have coming to this hospital cases that walk in as though their limbs were entirely sound, when upon examination there is found to be fracture of the fibula; indeed, I have even known patients to run quite a distance with the bone in this condition; again, this fracture is not unfrequently mistaken for a sprain of the ankle-joint, on account of the little pain and displacement present.

This bone is generally fractured by reason of indirect or transmitted violence, and when thus caused, the seat of fracture is apt to be two to three inches from the lower end of the bone. In case of fracture from direct violence, the break is more apt to occur exactly at the point upon which the blow is administered. As the lower end of this bone enters into the formation of the ankle joint by means of a flange-like extremity, any solution in its continuity is followed (more especially when the fracture is low down) by greater or less lateral displacement of the foot; normally there is but little lateral movement in the foot, but free lateral movements may be made when fracture of the fibula takes place; further, this motion, if made, is very apt to produce pain; the least bit outward makes the patient wince. Occasionally, in lean subjects more particularly, a little depression of the overlying tissues takes place over the seat of fracture; this, however, is apt not to be observable in fat subjects, so that it cannot be depended on as a diagnostic sign. There is one diagnostic point, however, on which you can invariably rely when the fracture is from two to three inches from the end of the bone. By feeling high up in the leg and just to the outer and back part of the tibia, the upper end of the fibula may be discovered. If, now, at this point, a little pressure be made, the patient at once complains of pain at the seat of fracture, one finger of the disengaged hand being now placed at the point of pain, and pressure being again made above, slight tilting of the upper fragment may be distinguished.

As to treatment, in this hospital we employ the fracture-box almost altogether; in those cases, however, where there is very great and uncontrollable lateral displacement, a Dupuytren splint is employed, the foot being carried strongly inward. The great trouble with this plan of procedure is that the patient does not bear it well, as it is apt to be exquisitely painful. Consequently, in twenty-four or forty-eight hours, or as soon as this tendency to displacement is overcome, the limb is placed in the fracture-box and treated as a case of ordinary fibular fracture.

Fracture of the Vertebræ.

Of late years a form of fracture frequently appears in this hospital which formerly we very rarely saw: I refer to fractures in various parts of the spinal column. During the last six or eight weeks we have had under our care in the wards some three or four patients suffering from this accident. Day before yesterday one of these cases died, but I am enabled to illustrate the remarks I am about to make to you on this subject, by the case of A. B., a laborer, aged about thirty, who is now before you, and who received his injuries by a wall falling upon him, some ten days since.

Fracture of the spine is apt to be the result of a fall, but the accident may happen in other ways. The cause of these fractures may, in fact, be classed under three heads: primarily, direct, violence applied transversely to the vertical line of the column, may be said to be the most common cause; thus, a fracture caused by a gunshot wound, by the passage of a heavy wagon

over the body, a fall of bricks, or of coal in a mine, would be classed under this head.

Secondarily, violence applied indirectly, as when one falls from a height and strikes on the feet, the impact of the blow being transmitted along the bones of the legs and pelvis to the column, is a very common cause of the accident. Where the conditions are reversed, and one strikes on the head instead of the feet, the same remarks will apply.

A third, although uncommon, factor in the production of this fracture, is extreme flexion of the column, especially when this flexion finally meets with resistance, as it eventually does. The greatest amount of motion in the lower part of the spinal column is about the junction of the last dorsal and first lumbar vertebræ, and it is at this point that the most common seat of fracture is situated when the accident is due to extreme flexion. The manner in which this variety of the accident happens is about as follows: A man standing at the bottom of a deep well has a bucket of earth or other material fall upon him; striving to shield his head, he stoops, when the bucket strikes him between the shoulders, forcing the column into a state of extreme flexion, the head of the man being jammed forward and downward. Some few weeks since a man was brought into the institution who was the victim of just such an accident, the accident taking place in a coal mine; paralysis followed immediately, and lasted till his death, some two or three days ago. A post-mortem examination revealed a fracture involving the bodies of the first, second and third lumbar vertebræ; the first being greatly displaced, compressing the spinal cord. This latter symptom (compression of the cord) is, of itself, almost pathognomonic of fracture of the vertebræ, for, being so tightly interlocked and joined to each other, by means of the various ligaments, dislocation of the various segments of the column, and consequent compression of the cord, is almost impossible unless fracture be present. The natural resiliency of the parts tends to drag them back into their proper position, and thus to gradually reduce the amount of compression of the cord.

The spinal column may break, as I have said, at any point, and at any part of each vertebra of which it is composed; the higher the seat of fracture the more serious are the consequences. Thus, if the fracture be situated at or above the third or fourth cervical vertebra, and the cord is completely compressed, death takes place almost immediately, for about this point the phrenic nerve to the diaphragm has its origin. Where compression is but partial life may continue for a while, till secondary consequences set in, these being effusions of blood, inflammation, etc. If the fracture be lower down, the diaphragm's innervation is not interfered with, and the man may continue to live a number of days, or even weeks, till, in fact, the muscle literally becomes tired out and ceases to work. The most common seat of fracture is through the arch, involving generally the laminæ, though the bodies themselves may alone be implicated. The gravity of the accident does not consist in the fracture of the bones, but in the injury which is inflicted to the very important within contained structures. In the case of the man before you the fracture is situated about the first lumbar vertebra; here, while the paralysis produced is serious, yet the compression of the cord taking place so low down, where it begins to split up into fibres that are covered by a dense neurilemma, and where the cord can bear a good deal of compression, involves no nerves or functions that are absolutely essential to life, or that cannot in some way be provided for. Had the fracture taken place in the dorsal region respiration would have been very seriously interfered with, owing to the paralysis of the chest muscles which would have been produced. In all cases of spinal fractures the functions of the bladder and rectum are greatly interfered with; the lower down in the column the seat of fracture the more will this rule apply. The patient, as in the case before you, is unable to micturate or to voluntarily empty the bowels. The consequence is that the bladder, for a few days after such an accident as we have been discussing, is unable to empty itself, the urine, gradually accumulating, finally overflows into the urethra, and constant dribbling of water is the result. This, of course, must be watched and provided for in a manner which I shall explain to you later, when discussing the treatment of such cases. In testing this man's sensation, I find that below the crest of the ilium I can, without giving him pain, thrust a pin into him, but above that point sensation again begins to be manifested. On closer examination of this man I find that there has even been some exfoliation of bone, so great was the amount of violence producing the injury. As a matter of differential diagnosis I may say to you, that if a patient is brought to you having a history of having had great violence administered to him, and there has been *immediate* paralysis following the blow, you can set the case down as one of fracture of the spinal column; if, however, the paralysis makes its appearance after some days have intervened, then you can diagnose the case as one of spinal shock, or of bloody effusions, etc.

We come now to consider the treatment of these cases, and I may at once premise that treatment is not very satisfactory. There is, in fact, no mechanical treatment applicable to the case; of course, if there is great displacement of the fragments we employ extension. Our efforts are rather directed to the mitigation of the secondary consequences than to the relief of the primary trouble.

The patient should be placed in the best possible condition to avoid bedsores, which, owing to defective innervation of the integument, are very apt to supervene, becoming at times so large that the patient is unable to bear up under the tremendous sloughing, and so finally sinks a victim to them. The best way to avoid this disaster is to place the patient on a water bed, which makes equable pressure on all parts of the body, and not on the salient parts only (like the buttocks, shoulders, etc.), as the ordinary mattress does. While the rubber bag, such as I here show you, makes the best and most convenient water bed, yet the expense attached to its purchase is frequently too great for the patient's means. I have devised a plan by which this ob-

jection is to a large extent obviated, while at the same time all the good effects of the bed are obtained. By making a water-proof trough, just large enough to allow the patient to lie in it comfortably (allowing some margin for turning him over, etc.), filling it with water and stretching loosely over it an ordinary gum blanket (costing from $2 to $4), this being just made tight enough to comfortably float the body, a very nice substitute for the more expensive article is obtained. The calves of the legs and the heels must be carefully watched and guarded; these and the other parts of the body liable to bed-sores being daily bathed and thoroughly dried. The bowels should be carefully attended to, as dribbling of fæces is apt to take place, producing great irritation of the integument. The bladder should be catheterized and kept thoroughly washed out, for the urine in these cases is extremely liable to become decidedly alkaline and phosphatic, and these deposits accumulating in the bladder, the urine becomes more or less fetid. To deodorize the water and wash the walls of the bladder, I am in the habit of using a saturated solution of boracic acid, which, being very mild, can produce no evil consequences; at times, also, I employ an injection of carbolic acid. In case of dribbling, a urinal, fitting between the patient's limbs and maintained in position, should also be employed.

Medical Societies.

MINUTES OF THE BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES, NOV. 1st, 1880.

Dr. Carl Seiler in the Chair.

Minutes of the previous meeting were read and approved.

Dr. J. Gibbons Hunt, in referring to a communication made some time ago, said the announcement then made by him, that ciliated epithelia covered the intestines of vertebrated animals, was received with considerable doubt by some of the members of the section.

Since then, a German journal contained a similar statement, which also fully verified his observations.

Dr. Hunt presented for examination some hairs taken from the head of an aged lady, which were of a beautiful carmine color. They were the short hairs underneath the gray, and covered the entire head. They presented no pathological condition. The color is permanent and of a uniform carmine tint. Under the microscope they presented no abnormal appearance.

Dr. Hunt, Chairman of the Committee appointed to prepare a report upon the exhibits and improvements in microscopical science, at the Fifteenth Annual Exhibition of the Section, held Oct. 15th, 1880, read a paper, of which the following is an extract:—

The hall of the Academy was comfortably filled, with, perhaps, two thousand visitors, who were distributed all over the building, the museum being opened and lighted for the fuller entertainment of our guests.

The Entomological Section contributed to our success, by generously displaying a portion of their magnificent collection of butterflies, moths and beetles.

One hundred and twenty-seven microscopes were in position. Of this number, Zentmayer made 48; Beck, 30; Crouch. 23; Bausch and Lomb, 7; Queen & Co., 5; Hartnack, 2; Lidle & Poalk, 2; Gundlack, 1; Ross, 1; J. C. Green, 1; J. H. Steward, 1; Unknown, 6.

Your Committee can look back to the beginning of microscopy in Philadelphia, and at that time, and for a long period after, Nachet's microscopes were the only ones—with few exceptions—then in use. Now, those inferior French instruments are not reported at our meetings.

Many preparations of animal tissues, human and comparative, were shown, such as infected lung, kidney, brain, skin, etc., and some were stained with carmine, then bathed in acid and mounted in balsam, secundum artem obsoletam; and all such looked about as well as could be expected. Best experience, however, is becoming convinced that it is no longer good work to stain only the bioplasts, and to fill the vessels with gelatine colored with carmine, and mount in balsam. Around every bioplast so treated is the cell-body, larger or smaller, which remains invisible. Moreover, growing and *finest* vessels cannot be structurally demonstrated in that way, neither can the connecting tissues which bind all other parts together be demonstrated or studied by these old processes.

Such work has no longer any significance in the entire and correct interpretation of the tissues, but it does create abnormal stomata, and apochryphal perivascular spaces to be found only in the books. Some recent sections, double stained by Cole & Son, of London, were shown at the meeting, and they revealed more tissue elements than any other balsam mounts yet seen this side of the Atlantic.

The division of cartilage—during change towards bone—the so-called osteoblasts, medullary cells and fat-cells, all with bioplasts showing division and vacuolation; not nebulously and doubtfully, but sharply differentiated under 500°, with the binocular, could be seen, educating us more fully into a better understanding of such things.

A beautiful slide of the young bot fly (æstrus gasterophilus) attached to a hair from the horse, is worthy of report.

Living polyps (pectinatella magnifica) and the new rotifer (apœcia emiliæ), intermediate between lascinularia and melicerta, are reported as well chosen illustrations of uncommon pond-life.

In exhibits of plant tissues, by double staining, we saw nothing new.

A new species (cribraria dictydioides) from our Park, is reported on exhibition.

Good slides of microsporon furfur, probably the cause of tinea versicolor of the skin; and of achorion schönleinii, an alleged cause of tinea favosa, or ring-worm, both difficult to obtain and preserve, are reported.

We note a marked advance in the preservation of delicate fungi, and of fresh water algæ. All such were preserved in camphor water one ounce and glycerine about six drops.

Wickerheimer's fluid is unfit for such work. Put all marine algæ in Goadby's solution, and many will be preserved unchanged.

Many beautiful polarizing objects were *well* shown. Æsculine and napthaline were among the most beautiful, but it is an error to exhibit these thin crystals under the binocular with the *second* eye-pieces, because such displays give bad definition. Expertness in microscopic display is best learned—and perhaps learned only—by *much* practice in the resolution of difficult test objects, because in such work greatest attention to illumination and adjustment of lenses is essential, and when that experience is once thus acquired it influences for best results all other displays. We observed many binocular microscopes badly illuminated, without achromatic condensers or an equivalent. This is an error. It is not possible to get best results with the binocular without a condenser below the stage. In all microscopic work command superabundant light. In microscopes some improvements and novelties may be reported for the past year. A small folding microscope, standing very firmly when in use, costing fifteen dollars, exhibited by Queen & Co., is worthy of report.

Beck has removed the flat foot, of whatever shape, from all his instruments, and they all stand on three toes, and are, therefore, steady. His new "International" stand presents some improvements of interest. The stage is 6½ inches in diameter and has ¾ of an inch lateral motion, and nearly that in vertical direction. Motion is given by a screw and rack opposed by springs, which are claimed to obviate loss of motion, a great improvement over his former stages. The stage rotates around the optical axis, and also around its own axis, by means of a milled-head pinion, enabling it to be completely inverted, and a graduated circle registers the degrees as it goes round. All the illuminating apparatus, if desired, swings around a centre level with the stage. The obliquity of illumination is registered on a large graduated circle, which is movable up and down, carrying with it all illuminating apparatus. To fix the body in any position a lever-handled clamp is attached to one trunnion. The fine adjustment is retained on the end of the body. If this microscope can be claimed as an instrument of supreme precision, it is wrong to place the fine adjustment on the body. Every time it is moved the magnifying power of the instrument is changed, and an error is introduced, and the microscope is just that much *not* an instrument of precision. Means have been found to remedy that defect, and all possible sources of error should be eliminated from the microscope of the future, just as soon as means are found to do it.

Another large instrument made by Beck, having a stage motion of four inches in either direction, is reported.

Zentmayer's improved "Centennial" stand was shown. Its new mechanical stage, five inches in diameter, is claimed as the thinnest yet made. Light 70° oblique is admitted beneath it. Milled heads move it vertically 1⅛ inches, and literally 1¼ inches. It may be inverted, if desired, retaining still the object in the centre of rotation of the sub-stage. The plan of swinging the sub stage is well-known, and not capable of improvement. It is the most simple plan yet devised for that purpose. The fine adjustment moves the entire body without changing its length. The finish and workmanship, and the motions of the instrument, place it, in precision, simplicity and excellence, far ahead of all microscopes at our meeting. Since this microscope appeared at our Centennial Exhibition for the first time, many skillful makers have aimed to secure some of its advantages by ingenious mechanical devices, but none yet have approached its classical simplicity and fewness of parts. This instrument marked a new departure in the construction of microscopes, and without injustice your Committee can say no less.

We report two lamps attached to microscopes in place of the mirrors. One was an ordinary Beck's lamp, fitted with a carrier for the purpose. The other, made by Zentmayer, was three inches high, including chimney of blue glass, and about 1¼ inch wide. It could be adjusted without rack in every direction, gives out no perceptible heat of a hot night, and will burn without refilling for six hours. With Wenham's modified binocular prism it gives superabundant light in both fields, with a twentieth objective. With his ordinary prism, it fills equally well both fields with all lenses up to a fifth. It requires only a slight addition to the ordinary condenser to make it very desirable. It is elegantly made.

Editorial Department.

Periscope.

Non-Interference in the First Stage of Labor.

Dr. G. Hamilton, in an article on obstetrics, published in the Edinburgh *Medical Journal* for October, 1880, remarks:—

On a former occasion I said that it seemed to me almost worthy to be held as axiomatic that, in labor, danger to the mother will increase in the ratio in which the forceps have to be, or rather are, introduced *within* the uterus, even when the os is well dilated; and this was very forcibly brought out during the recent discussion on the subject in the London Obstetrical Society. In the *Medical Times and Gazette* for August, 1879, it is remarked by the editor that when the practice at the Rotunda of Collins (who used the forceps only once in 608 deliveries) is compared with Johnston's, who (often before the os was dilated) used them once in ten deliveries, the maternal mortality has been

more than doubled, while the fœtal mortality was also increased. On these statistics I would make two remarks: 1st, as I have said already, there may be great fallacy in comparing maternal mortalities at all, from the erratic outbreaks of puerperal fever; and 2d, in this case I would say we are only comparing one bad practice with another bad one, which at most can give us only very unsatisfactory results. The discussion, however, has been a most valuable one, and the tendencies have mostly, I think, been in the right direction. It is to be hoped that it will, at any rate in this country, give the *coup de grace* to frequent instrumental interference with labor in its first stage, though I almost got afraid for a time that Dr. Johnston's high position and example were going to make it "fashionable." Whether it survive in this country or not, however, it does not yet seem dead in "the States," for, through the politeness of Professor Taylor, of New York, I have lately received from him a reprint from the 4th vol. of the *New York Gynecological Transactions*, in which the same practice is still advocated, and in which a drawing is given of forceps 16 inches long and with blades only 1½ inch broad, which can, the Professor states, be introduced through a very small os uteri. Of this practice I have no experience and as at present I am using my pen chiefly for the benefit of the younger members of the profession, I think I need say nothing further regarding it, as all confess, at least, that the practice is a difficult one. My forceps are 13¾ inches long and the blade 1¾ inches broad, and I have always as yet found them to answer the purpose required most admirably. They are straight, and I therefore never get confused in thinking of possible injuries to the mother; and when the head is at the brim I throw the handles back toward the perineum, to enable me to lay hold of it; in doing this I am not particular in what direction the instrument catches the child, for I have never known my forceps injurious, even when placed over the face. When they do catch I use gentle traction with one hand, at the same time that I push the uterus up over the head with the other, until I am able to touch an ear, and then I usually find that all is simple and safe.

The Treatment of Nephritic Colic.

Dr. C. G. Stockton, himself a sufferer, says on this subject, in the Buffalo *Medical and Surgical Journal*, Nov., 1880:—

Sydenham enthusiastically advocates the use of beer "To cool off the ardent humors that remain in the kidneys and produce stone." Segalas and more recent writers reinforce this statement. I found that beer aggravated these symptoms, as did sour wine and cider. Most writers pronounce beer and all fermented drinks injurious. Sydenham having experienced personal benefit from the frequent use of cathartics, recommends the use of manna and lemon juice. (This acted unfavorably in my own case, where the stone was oxalate of lime.)

But diluents, recommended by the most ancient of medical authorities, still best subserve our purpose at this time. So much for a condition of comparative repose. It is after some unusual exertion that a sensation of uneasiness and qualmishness is experienced, followed soon by intense pain in the lumbar and inguinal regions of the affected side; this shoots down into the corresponding testicle, which alone, or with its fellow, is violently retracted. Micturition is painful and almost continuous, the urine scanty, highly acid, of a grayish hue and mingled with blood. The gastric apparatus is greatly disturbed; there is flatulence, colic, frequent dejections, tenesmus.

The pain is best controlled by morphia and atropia, hypodermically, and the application of heat, either by long continued general bath, or by rubber hot-water bags placed under the back and about the scrotum. I cannot speak too highly of the hot-water bag as an epithem. It is more efficacious than the bath, since it can be used continuously without fatigue to the patient.

Enormous eating should be proscribed; the meals should be small, frequently and regularly taken. Hard, particularly lime waters, should be interdicted; but the drinking in abundance of wholesome waters advised.

Upon drinking Niagara water I find the urine more acid and turbid. Drinking Bethesda, Apollinaris, or rain waters, increases and clears the urine, rendering it less acid. This is especially true of Bethesda water.

The Gettysburg Katalsyne is an agreeable water, and has a favorable reputation as a remedy in renal concretions, as its constituents would lead us to suppose.

Probably the springs of Vichy provide the best waters for cases of the uric acid diathesis.

The Celestine spring is most frequented by patients with gravel, though without any apparent reason, as the spring is less alkaline than its fellows.

The Malvern water is a favorite in England. It is almost perfectly pure; so far as I know, the purest spring water on record. There is no end of good waters. I have for some time been drinking "Rosicrucian springs" water; it comes from Maine, is very agreeable, and is said to be like Apollinaris without the gas.

On the Therapeutics of Chronic Metritis.

M. Gallard, in *Le Concours Médical*, October 9th, 1880, discountenances active antiphlogistic treatment; for, succeeding the primary hypervascularization of the uterine tissues, there ensues a period of anæmia with general atrophy of the vessels of the organ.

He recommends simple emollient baths, particularly at menstrual periods, or when there is any recrudescence of inflammatory action. Alteratives would seem peculiarly indicated in a disease characterized by a deposition of plastic material determining the augmentation in volume of the organ, but they generally induce, when long used, so much derangement of the general health, that the small amelioration obtainable from them does not often justify their use for any considerable period of time.

Tartar emetic has been used in large, even Rasorian doses, in puerperal metritis, with doubtful benefit.

Calomel, which is frequently given, generally

induces salivation too early, which is also the case with blue pill; bichloride of mercury with conium, as recommended by West, can be administered for a longer period.

When, in the first stage, there is peritoneal inflammation, mercurial ointment spread over the abdomen is of benefit; and M. Gallard often uses the diluted ointment to dress blisters, applied over the abdomen in later stages.

The preparations of iodine have had such a favorable action on the indurated tissues, particularly when dysmenorrhœa or amenorrhœa was present, that some of the salts of the iodides of iron and of potash have been considered emmenagogue. Ergot is of undoubted benefit in the first stage of chronic metritis, where the uterus is gorged with blood; by inducing contractions it improves the tonicity of the organ, the circulation becomes more rapid, the exudation products ready to be transformed into laminated interstitial tissue are absorbed; in fact, the inflammation is often subdued before arriving at the second period. Ergot may be given in powder, gr. ss.–j, ter in die, or in pill, as in the following formula:—

℞. Ergotin,
Ferri carb., āā ʒj–gr. xv
Ext. opii, gr. iv.

Form the mass into fifty pills, of which four may be taken daily; if abdominal pain should be complained of, the use of ergotine should be dropped for a period.

Effects of Lightning-Stroke on the Animal Organism.

Professor Nothnagel relates (Virchow's *Archiv*, May, 1880) some experiments he made on rabbits with the Leyden jar. He found that sufficiently powerful sparks produced a localized anæsthesia of transient nature. The extent of the lesion was proportional to the density of the electrical fluid, that is, to its quantity divided by the diameter of the limb. At the same time the motor fibres were temporarily paralyzed, the duration of the paralysis being about the same as that of the loss of sensation. The faradic excitability of the paralyzed nerves was diminished. The author next describes a case where a man was struck by lightning on his right hand, which became completely paralyzed and anæsthetic, and remained so for ten weeks. The recovery was sudden and rapid; in two days the hand became quite well again, and remained so for six years, when suddenly both sensation and motion disappeared from it. Three months after this occurrence he was admitted into the hospital. He was submitted to the usual electro-therapeutic measures during a few days, but without the slightest benefit. One day, however, it occurred to Professor Nothnagel, who was then experimenting with the magnet on a case of hemi-anæsthesia, to apply the latter to the paralyzed hand. His astonishment was great on finding that within three-quarters of an hour sensation and motility were returning. Further applications of the magnet were followed by a complete recovery, and a few days afterwards the patient resumed his work. No transfer was observed.

Chrysophanic Acid and Pilocarpine in Skin Diseases.

The St. Louis *Courier of Medicine and Collateral Sciences*, for October, informs us that at the meeting of the St. Louis Medico-Chirurgical Faculty, July 12th, 1880, Dr. Hardaway remarked—

The members present will probably recall to mind a case of psoriasis occurring in a boy of thirteen, whom I exhibited to the Society some months ago. At that time the eruption had disappeared after a few weeks of treatment by an ointment of chrysophanic acid. He took no constitutional treatment. When seen a few months ago there had been no return of the eruption. This case is not brought forward to prove that relapses do not occur after the use of chrysophanic acid, for a considerable experience with this drug in this disease demonstrates the contrary; but I mention it merely as exhibiting the now acknowledged remarkable influence of the remedy, and principally to show that local treatment is all sufficient for the relief of psoriasis, and that the recurrence of the eruption is not any more to be expected than after the most carefully conducted general medication. In a case recently treated, occurring in a gentleman of about forty years, who had been affected from youth, the eruption was unusually inveterate, and required, for some patches, an unusual strength of ointment—ninety grains to the ounce—for its removal. Usually a ten or twenty per cent. ointment is sufficient. While on this subject I may mention some recent experiences with the muriate of pilocarpine in skin diseases. I have given the drug in a number of cases of alopecia, but as yet with no definite results. In an exceedingly obstinate case of general pruritus, after I had run through the usual list of local and internal remedies without avail, I placed my patient on one-eighth grain doses of pilocarpine, as advised by Pick. This quantity proving of no service, I increased it to one-quarter grain twice a day. The former dose had not produced the physiological effects of the drug; but one-quarter grain caused profuse perspiration, with but little salivation, and very soon after this effect was noted the pruritus disappeared.

Sudden Death in Typhoid Fever.

The *Lancet*, October 2, observes: The occurrence of sudden death in typhoid fever, without any hemorrhage or perforation to explain it, has been variously accounted for. According to Dieulafoy it is always due to syncope, a reflex result of the intestinal lesion. But the accident has been met with after the intestinal ulceration has cicatrized, and also in typhus, in which there is no ulceration of the intestine. Hayem has ascribed it to organic changes in the heart, degeneration of the muscular fibres, but in some cases described the heart has been found to be healthy. Laveran attributed it to cerebral anæmia, and Huchard to a combination of this with cardiac degeneration. M. A. Marvaud has re-examined the question in the light of some cases which occurred last winter at Algiers. In this epidemic, thoracic complications were especially frequent. Twenty-two cases died out of ninety treated at one hospital, and in ten of these the

heart presented ante-mortem clots. In four of these ten cases death was sudden; in three there was slow asphyxia with collapse, and in one death was preceded by free intestinal hemorrhage. In the four cases of sudden death this occurred while the patients were making an effort. M. Marvaud believes that the pulmonary complications may have assisted in the production of the intra-cardiac coagula—first, by the mechanical obstruction to the circulation, and secondly, by increasing the tendency of the blood to coagulate. In some cases death is instantaneous, and probably in these the intra-cardiac coagula interfere with the action of the valves, or plug the pulmonary artery. In other cases death follows asphyxial symptoms—quick breathing, anxiety, oppression, cyanosis, chilling of the extremities, small pulse, and collapse.

Venesection in the Treatment of Hæmophila.

Mr. Henry Finch reports the following case in the *Lancet*, Oct. 2, 1880:—

A stout, healthy lady, between fifty and sixty years of age, was suddenly attacked in bed, at night, with profuse bleeding from the nose. I was sent for, and the patient, whose indomitable pluck and steady coolness under a full knowledge of the danger she was incurring contributed much to the fortunate issue, told me that a brother had died in a few days, from uncontrolable bleeding following some very trivial skin wound, and that an aunt had frequently suffered from copious bleeding consequent on very inadequate exciting causes.

The patient was treated in the routine manner—astringents syringed into the nasal fossæ, ice, iron, and ammonia internally, and finally plugging the nares; but all to no purpose. The bleeding, if it ceased for a time, soon came on with redoubled energy; the patient at intervals vomited quantities of dark blood.

I was with the patient two nights, who, notwithstanding the increasing pallor, anæmia, and weakness, preserved her spirits wonderfully. After forty-eight hours of this continuous bleeding, it was evident that unless the hemorrhage could be stayed death would speedily ensue, and as a last resource, in a sort of empirical way, we determined to try the effect of diminishing the blood-pressure by opening a vein in the arm. The state of the patient, while it nerved us to adopt any probable means of staying the flow, made recourse to this particular remedy without previous experience an anxious proceeding. Mr. Sloman opened a vein in the bend of the left arm with some difficulty, owing partly to its small size, and partly to the presence of much superficial fat. The nasal bleeding stopped as soon as a little dark blood had flowed away. After making sure that no further loss was taking place, the vein was closed. The hemorrhage did not return, and from thence forward the patient made a protracted but perfect recovery.

In two other cases which I can call to mind—a gentleman of thirty and a girl of seventeen years, both with well-marked hemorrhagic diathesis, and with hereditary history of the complaint—I have tried venesection, and in both cases success has been immediate and complete.

The Approximate Estimation of the Size of a Stone in the Bladder.

Dr. W. Huston Ford, of St. Louis, Mo., in an article on the "Early Diagnosis of Stone in the Bladder," published in the St. Louis *Medical and Surgical Journal*, says:—

To estimate the size of the stone after fairly striking it, the sound should be introduced far enough to make sure that its tip has passed beyond the calculus, care being taken to avoid touching the stone in doing so. The instrument is now to be very gradually and slowly withdrawn with light taps on either side as before, until the stone be grazed, when the clip upon its shaft is to be slidden up to the extremity of the penis and its position on the shaft, read off. The motion of the sound must be always steadily outward, so that the penis is stretched and its extremity thus made available as a fixed point for measurement. The clip being fixed, the sound, after grazing the distal end of the stone, is still cautiously withdrawn with light taps upon the stone itself until these cease to be heard, when the slip is again run up to the meatus and a second reading made. The difference between the two readings will be the diameter of the stone, *approximately*, in the direction in which it lay when struck. A still more accurate estimate can, of course be had, by direct measurement between the jaws of a light lithotrite designed for that use, but this instrument forms a part of the armamentarium only of operating surgeons.

Fuchsin in Bright's Disease.

In Virchow's *Archiv*, Bd. 80, Prof. De Renzi, of Genoa, gives his experiments on Bright's disease. He arrived at the following conclusions: 1. When chronic Bright's disease is left entirely without treatment, in general no improvement is shown; hence this must be excluded from the category of those diseases which in many cases end in spontaneous recovery. In the first days after entering the hospital, or when the treatment is purposely left off, the patients show a considerable quantity of albumen; this rule has, however, some exceptions which have not up to the present time been well explained. 2. Fuchsin, which has lately been recommended in the treatment of Bright's disease, produces a remarkable diminution in the quantity of albumen. It was employed in two forms: dissolved in water, or, mixed with a suitable extract, in pills of 2½ centigrams each. As, however, the strong coloration of the infusion of fuchsin in water is somewhat repulsive, Dr. De Renzi found it preferable to administer it in the pill form, and to this he has adhered in his latest prescriptions. 3. The daily dose of fuchsin may be much greater than that in which it has hitherto been recommended in the treatment of Bright's disease. Dr. De Renzi generally began with a very small dose of 5 centigrams (0.75 grain), raising it to 25 centigrams (3.8 grain), to be taken in twenty-four hours. A considerable physiological action on the principal functions of the body was observed. According to the dose of fuchsin, the urine began sooner or later to show a red color, which maintained itself

throughout the treatment. 4. The urine in Bright's disease often exhibits a great deal of mucus. Fuchsin is very useful against this complication, as, in a short time, it causes the complete disappearance of the mucus from the urine. 5. The mucous membrane of the digestive track is deeply colored by fuchsin, and the blood-plasma undergoes considerable coloration. In two cases, the quantity of hæmoglobin and the chromometric state of the blood were examined with Bizzozero's instrument, with the following results: *Maria Molinari:* Cytometric state, 160; Hæmoglobin, 68.7; Chromometric state, 175. *Theresia Gabella:* Cytometric state, 115; Hæmoglobin, 29.7; Chromometric state, 112. It is evident that the increased intensity of color is not to be ascribed to the increase of hæmoglobin, but rather to the increase of the fuchsin in the blood. 6. When fuchsin does not pass into the urine, this is an indication of an organic disturbance which must not be neglected. In these cases, it is of no use in the treatment of albuminuria. 7. Rest of the patient in bed is a very important means of diminishing the albuminuria in Bright's disease. In a patient, *Vittoria Rossi*, complete rest in bed, together with milk-diet, brought about the greatest diminution of the albumen in the urine. Dr. De Renzi was several times able to ascertain that unusually active movement of the person had a dangerous effect in Bright's disease. 8. Apomorphia was in general well tolerated; and Dr. De Renzi has ordered it in larger doses than usual (viz., 5 to 6 centigrams daily). without causing the least disturbance. In one case, this medicine considerably improved the condition of the patient.

The Use of Chloral as an Anæsthetic in the Minor Operations on Children.

M. Bouchut has written to the *Gazette des Hôpitaux*, on an anæsthetic he employs in the minor operations on children. The agent he uses is chloral, of which he administers one, two, three, and four grams, according to the age; two grams might be given without danger, between three and five years. The dose, one, two, or three grams, as the case may be, is given in four ounces of water, well sweetened; the whole being taken at once. Half an hour afterwards the child sleeps, and in an hour is perfectly insensible. This sleep lasts from three to six hours, and the child awakens as fresh as if after natural sleep. Once insensibility arrives a great number of operations can be performed, such as extraction of teeth, destruction of erectile tumors by caustics, application of Vienna paste, opening of abscesses, thoracentesis, redressing of malformed limbs, anchylosis, etc., without any other inconvenience than that of leaving the children to sleep off the effects of the chloral. M. Bouchut asserts that he has administered this anæsthetic over ten thousand times at the hospital (*Hôpital des Enfantes Malades*), and never had an accident; where the stomach rejects the chloral (which is very rare in children), a suppository with the required dose is given, and when it has melted sleep comes on. M. Bouchut, however, is not much in favor of this mode, as chloral, he has found, irritates the rectum after the third or fourth time. Although chloral is so well tolerated in the child, it is far from it in the adult. M. Bouchut never could succeed in giving a dose large enough to produce insensibility, as when four grams were administered it was rejected at once. If the employment of this anæsthetic, says M. Bouchut, were attended with any danger, it should be abandoned, but as I have already stated, there is none whatever.

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——A reprint from the Archives of Laryngology, Vol. I, No. 3, 1880, contains a paper "On the Use of the Thermo-cautery in Tracheotomy," by Dr. J. Böckel, of Strasburg, translated by Dr. C. E. Sajous, of Philadelphia.

——The "Surgical Treatment of Naso-Pharyngeal Catarrh" is the subject of a paper which was read before the American Medical Association by Dr. D. H. Goodwille, and which now comes to us in pamphlet form, reprinted from the *Medical Gazette*, July 31, 1880.

——We have received in pamphlet form the address delivered before the Medical Society of the State of Pennsylvania by Andrew Nebinger, M. D., President of the Society, at its annual meeting held at Altoona, May, 1880. The chief subjects discussed were "Medicine and Medical Education."

——Dr. Geo. J. Engelmann, of St. Louis, Mo., in a reprint from the Transactions of the Missouri State Medical Society, 1880, discusses the "Dangers Incident to the Simplest Uterine Manipulations and Operations," giving the history of twenty-three cases. The same author also sends us a supplement to his recent paper on "Time of Conception and Duration of Pregnancy," in which three additional cases are recorded.

——There has appeared, in pamphlet form, a very interesting letter addressed to Rear-Admiral Daniel Ammen, U. S. N., on the "Inter-oceanic Ship Canal and the Yellow Fever Zone," by John Gamgee, in which the author advocates the opening of communication through the Nicaragua Lake, as vessels in crossing the Atlantic would reach this sooner, and not be becalmed in the equatorial Atlantic, where the author asserts that yellow fever originates. Those interested in the medical aspect of the inter-oceanic canal should not fail to read this letter, as well as Dr. Boyland's masterly paper, before alluded to in the Reporter.

BOOK NOTICES.

Report on Yellow Fever in U. S. Steamer Plymouth. Extracted from the Report of the Surgeon-General of the Navy, 1880.

In the Hygienic and Medical Reports of the Navy Department for 1879, Surgeon Theoron Woolverton gave an account of yellow fever on board the steamship Plymouth, which not only redounded to the reporter's credit, but to that of naval surgeons as a class. It is to be regretted that the excellent opportunities enjoyed and sound sense so often displayed by our naval surgeons have been imperfectly appreciated by students of yellow fever. Case after case has been recorded and made the subject of special inquiries, with the most frequent result of demonstrating dangerous forms of naval decay and rottenness which, in tropical cruises, have combined with the essential marine factor for the development of this plague. In his statement, Surgeon Woolverton said: "It is my conviction, from the course of the disease, that the yellow fever infection is confined to the hull of the ship, and especially in the rotten wood about the berth deck." It will be remembered that the Plymouth was frozen out, but much of the badly decayed wood was left in her, notwithstanding some considerable repairs at the Boston Navy Yard, prior to sailing for the Windward Islands, last year. No sooner was the vessel subjected to tropical heat than yellow fever recurred, and the cruise had to be abandoned. Surgeon Woolverton declared that it was "not shown that cold will not destroy the yellow fever infection, but only that cold did not sufficiently or entirely penetrate the spongy wood to reach it."

With commendable solicitude, the Secretary of the Navy has pursued this case to the end, and Surgeon-General Wales has done wisely to exhaust all means of research within his reach. The monograph before us is full of interesting and suggestive matter. It shows how gradual, and yet not slow, was the deterioration in the Plymouth's sanitary condition. Launched at midsummer, 1868, and extensively repaired in 1873, she was peculiar for having an excess of white oak over live oak in her hull, and in 1877 "she began to show herself to be a decidedly unhealthy ship." In the fall of 1869 she suffered from yellow fever, notwithstanding stringent precautions against the introduction of the disease. In a report made at Hampton Roads, November 17, 1878, Surgeon Woolverton gave it as his opinion "that the fever had a purely local origin in the ship."

It was the second outbreak, on the brief cruise of 1879, after a winter's frost, that staggered naval officers and the public at large. The board over which Medical Inspector R. C. Dean presided has dispelled the mystery, while fully sustaining the mature opinion of the steamer's own surgeon. Surgeon-General Wales ordered a thorough inspection, by exposing all parts of the ship to view, and confined spaces, whence openings gave exit to a very offensive odor, were discovered. The ceiling and hanging knees, clamps, etc., were extensively decayed all along the berth deck. Fungus abounded. Behind the locker on the port side was found a large quantity of partially decomposed refuse. Fœtor was unlocked, especially above "the port and bunker, and here four cases of yellow fever, all occurring during the first outbreak, were billeted. One case, occurring during the second outbreak, was billeted on the starboard side, exactly opposite, and one near the galley — localities where decayed wood was found to be particularly abundant."

Omitting various data of a like description, it is interesting to read, that "on the starboard side one of these spaces were found to be completely filled with a soft mass, of intolerably offensive odor, which seemed to consist chiefly of beans in all stages of decay; the other space was equally full of sponge, clothing, chips, and other refuse, more or less decomposed. The stench from these deposits was such as to drive the workmen on deck."

"Between other frames, on both sides, were masses of bacterial growth similar to that found in the forward shell room; and on the port side, in the *culs de sac* corresponding to those containing the beans and refuse on the starboard side, were found a quantity of unrecognizable decomposing organic matter. *It was directly above this hold that three cases of yellow fever occurred during the first outbreak.*

"Under the flooring of the magazines was a great accumulation of decomposing chips and auger dust, emitting a foul odor, and evidently left there when the ship was built. Under the lead-lining the sheathing was entirely rotten and blackened, as if the wood had been charred, and in this rotten wood dead rats and their nests were found. The thick strakes and ceiling were badly decayed. On cutting through the bread-room floors, confined air of offensive odor escaped. Living and active flies crawled out of confined spaces between the floors.

"We are of opinion," says the board, "that the various deposits of decomposing organic

matter, and the quantity of decayed wood above described are closely connected with the development of yellow fever on board of the Plymouth."

The narrative as published is most instructive, and we regret that we cannot follow the reporters in their speculations as to disinfection and the germ theory. The germ is still undiscovered, if there be any; its discovery cannot, in our opinion, upset the truth that low temperature is destructive of the yellow fever poison. That is the one incontrovertible fact in the history of the disease; but no sane man would pretend permanently to purify a foul ship like the Plymouth, without first removing all fetid accumulations and rotten wood. The attention of naval constructors should again be directed to the dangers of wood shavings and to the inconvenience of inaccessible recesses which may accidentally be filled by putrescible substances. Neither sulphurous acid nor frost could neutralize the mass of putrefaction which, in the yellow fever area, might have destroyed the ship's company, but for Surgeon Woolverton's prompt diagnosis. G.

On the Bile, Jaundice, and Bilious Diseases. By J. Wickham Legg, Fellow of the Royal College of Physicians, of London, Assistant Physician to St. Bartholomew's Hospital, and Lecturer on Pathological Anatomy in the Medical School. New York, D. Appleton & Co., 1, 3 and 5 Bond Street, 1880. Cloth, 8vo, pp. 719.

The first four chapters of this work are devoted to the chemistry of the bile, the bile acids, bile pigments, the fats, salts, gases, and other constituents of the bile, and the physical and chemical appearances of human bile. The history of the physiology of the bile, and the sources of bile in the economy, the amount of bile secreted in health and the agents which affect it, the office of the bile and the action of drugs upon its secretion, form the subjects of the next four chapters. A chapter is then devoted to the physiological action of bile, after which comes a thorough discussion of jaundice, its etymology, history and etiology, symptoms, complications, morbid anatomy, diagnosis, prognosis and treatment, different varieties, etc. Yellow atrophy of the liver, yellow fever and poisonings by phosphorus, arsenic, antimony, and other substances producing a jaundiced condition, are next taken up for consideration. Icterus febrilis, i. syphiliticus, i. a venenis, i. gravidarum, i. embryonum, i. neonatorum, i. infantum, with congenital defect of the gall ducts, and i. menstrualis, all receive their full attention. A chapter is then devoted to *bilious diseases*, a term which the author very sensibly suggests should be discontinued, as it is incorrect, and apt to confuse and mislead rather than give information, the diseases included under the term being now commonly attributed to acute gastro-intestinal catarrh, and the jaundice which sometimes accompanies them being purely accidental. The last chapter contains a complete bibliography of icterus epidemicus, acute yellow atrophy of the liver, and congenital constriction of the gall ducts. As will be seen, the work is almost encyclopædic in its character, the author giving not only the results of his own researches, but also the opinions of the leading authors from the earliest period in medical history down to the present day. New light is thrown upon the rational treatment of hepatic disorders, and the universal use, or rather abuse, of cholagogues condemned. The author in his preface deplores the fact that in England all experiments on animals have been forbidden, which rendered it necessary for him to cross over to France in order to carry out his investigation. Says he: "We pay for our freedom in some matters by being at the mercy of every truculent agitation in others; and a senseless outcry, by putting on the garb of religion and morality, from the highest authorities in which it receives no countenance, but rather condemnation, has prospered in its design for a time."

On Slight Ailments: Their Nature and Treatment. By Lionel S. Beale, M.B., F.R.S., Fellow of the Royal College of Physicians; Professor of the Principles and Practice of Medicine, King's College, London, etc., etc. Philadelphia, Presley Blakiston, 1012 Walnut Street, 1880. Cloth, small 8vo, pp. 353. Price $1 50.

This work has been prepared from a series of lectures delivered by the author in the autumn of 1878, and contains a large amount of valuable information with regard to the nature and management of such minor troubles, which, though not dependent on any demonstrable organic lesion, are still apt to give the patient a great amount of discomfort and anxiety, and perhaps to puzzle the physician far more than the gravest disease. Prof. Beale is so well known as a scientific writer, that a work from his pen is sure to be welcomed by those who have read any of his previous productions. His style is so clear and interesting, and in the book before us the symptoms and course of the diseases treated of are so vividly and accurately depicted, and the advice given as to treatment so excellent, that no student or young practitioner should neglect to read it.

THE

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TRICHINOSIS AND ITS SEQUELÆ.

Not long since we called attention to the fact that American pork had been forbidden entrance into a number of European countries, on account of its alleged infection with trichinæ. At the same time we urged the appointment of inspectors to examine all swine slaughtered for the market. For years this has been done in Germany, and in that country no one is allowed to kill a hog without notifying the inspector to examine the flesh.

The subject of trichinosis has received more attention in Germany than elsewhere, simply because the disease is more prevalent there; and the reason of this is that the Germans consume their meat very frequently in a raw or half cooked state. One of the latest studies of this subject is by Dr. RUPPRECHT, in the *Vierteljahrsschrift für Ger. Med.*, October. His results are so interesting that they merit repeating.

He finds that this parasite causes in the human subject quite different symptoms, depending upon the number present in the body. His estimate is that when there are in round numbers 30,000,000 present, there is a choleroid form of disease which makes its appearance at the end of the second week, beginning with diarrhœa and vomiting. The result of this is generally fatal. A second form occurs, bearing strong resemblance to typhoid fever. In this at least 20,000,000 of trichinæ are present. It arises after the consumption of half cooked meat, as the choleroid form follows the use of quite raw flesh. In both cases death results from paralysis of the muscles of respiration, or else from intercurrent pneumonia. In case the sickness does not appear until from twenty-one to twenty-four days, there are, as a rule, only 5,000,000 or 10,000,000 present, and then the sickness has rather the appearance of acute rheumatism of the joints. When not more than a million trichinæ are present the malady begins about the twenty-eighth day after the use of under-done meat, and has a course similar to wandering rheumatism, and is without immediate danger.

The great variety of the symptoms and the varying time they appear after partaking of the infected food make it very probable that numerous cases of trichinosis occur without being recognized by the physician. Who can say how frequently a false diagnosis has been made? Certain it is that unless the attention is especially directed to the subject they will surely pass unobserved.

Hardly less serious than the disease itself, are its possible sequelæ suggested by Dr. RUPPRECHT. These include not only prolonged muscular pains simulating rheumatism and permanent muscular irritation, but also apoplexy. The latter arises from embolia which gradually form from softening of the tissues, the result of irritation caused by the trichinæ capsules. He thinks he has observed this and traced the attack of trichinosis.

But this is not the worst. He claims that the slight but constant irritation of the muscles, arising from the presence of the parasite, may in the end develop *cancer!* At any rate, he says there have been found, many times, muscle penetrated with trichinæ in the immediate vi-

cinity of cancerous tumors. It would take considerable evidence to persuade us to go this far, but the assertion is worth repeating.

It will be asked whether the writer quoted offers any information as to treatment. Very little. He tells us we must look to the future. He mentions benzine and ergot, with which we have long been acquainted, and of which we know little that is good. A new suggestion of his is *gall*, which in one case appeared to destroy the parasite, or at least none could be found after its exhibition.

Meanwhile he recommends as the soundest plan to proceed, to begin with an emetic, follow it with a fifteen-grain dose of calomel, and this to be backed up with quinine and iron. The difficulty is to preserve life during the unconquerable aversion to food which overcomes the patients in severe cases.

As to prevention, his recommendations are, conscientious, scientific inspection of the flesh of all swine, and its thorough cooking when prepared for food; unless, indeed, we are willing to obey the command so positively laid down in the Bible, and refrain from eating swine's flesh altogether.

As few can be persuaded to do this, the other alternatives deserve the more attentive consideration.

THE VALUE OF DIPLOMAS.

The recent exposures on the subject of the diploma traffic, made in this city, have led to a general discussion as to the value of these supposed evidences of learning. One of these discussions appeared in the London *Times*. That important organ of public opinion intimates that bogus diplomas are nearly as good as any others; and that the title of M.D. might well be abolished, leaving to every one the right to call himself doctor who follows the indicated profession. Commenting upon the prosecution of Dr. Buchanan, for forging medical diplomas, it says the English universities have sinned quite as much as he, in making degrees a mere matter of money. Many thousands of men add M.A., D.D., or D.C.L. to their names without having answered a question, or shown any scholarship or knowledge over and above what was implied in a B.A. degree. The *Times* considers that Dr. Buchanan was only following out the general contempt for the value of learned titles which exists everywhere.

That this cynical view of the question is partially justified, is shown from an article in the London *Lancet*, of September 25th, which throws some light on the way degrees are given in England. It is there stated that there exists great inequality in the examinations. It is added that many cases of gross ignorance pass licensing boards. Even Sir JAMES PAGET had to confess that the examination in his own college was most indefensibly defective. Thus, a person may practice medicine with authority anywhere in the British Empire without undergoing an examination either in chemistry, midwifery, materia medica, or the practice of medicine! Such persons are called surgeons, but are entitled to attend all cases.

We shall not make any remarks on the amount of knowledge required in most American colleges, nor estimate the exact value in erudition of the average graduate. That subject has been often enough discussed of late. Sufficient to say that no one will be bold enough to claim that most American diplomas guarantee even a moderate thoroughness in medical training.

Even in Germany, to which country we are accustomed to look for all that is solid in education, the complaint is frequent that medical botchwork prevails to an alarming extent. In fact, it was in that country that the enterprising Dr. BUCHANAN opened up one of his most active markets.

How to correct this evil was the subject of a debate at a recent meeting of the German Society of Public Health. We cannot say that any definite results were reached. It seems that at present it is not possible to frame laws insuring higher qualifications in their doctors than the public desire. If they prefer boasting charlatans, ignorant pretenders, or unscientific claimants, they cannot be forced to call in others.

The only suggestion which was made in the

debate referred to worth reporting was, that in every case of death a post-mortem examination should be made by State experts appointed for the purpose, and that unless the pathological appearances verified the cause of death as reported by the attending physician, the latter should be held liable for malpractice. It is easy to be seen that no such step could be taken in this country, and even under the far more rigid rules of German life it was looked upon as impracticable.

For ourselves, we believe that the true solution of the problem rests in the general education of the masses. When they learn what science is, and what the results of correct thinking are, they will require a more and more solid education in medical men, and this demand will, as is usual, bring about the supply.

Notes and Comments.

A New Classification of Skin Diseases.

One of the recent Vienna medical publications is Prof. Ausspitz's "System of Skin Diseases." From a review of it in a foreign exchange, we extract the classification he adopts. It is as follows:—

1. Simple inflammations of the skin variously produced (*e. g.*, eczema, scabies, and acne are in this class).

2. Angio-neurotic dermatoses — dermatoses characterized by extensive disturbance of the vascular tone, with more or less inflammatory congestion on the surface of the skin (*e.g.*, measles, small-pox, medicinal rashes, erythema multiforme, are in this class).

3. Neurotic dermatoses—dermatoses caused by disease of nerves of sensation, and perhaps trophic nerves (*e.g.*, herpes zoster, decubitus acutus, are in this class).

4. Dermatoses caused by passive congestion (*e.g.*, cyanosis, elephantiasis arabum, and scleroderma, are in this class).

5. Hemorrhagic dermatoses (*e.g.*, purpura and scurvy, are in this class).

6. Idio-neuroses of the skin—functional anomalies of the cutaneous nerves, without trophic changes in the skin. (This class contains, among others, neuralgia, pruritus and prurigo.)

7. Epidermidoses—anomalous growths of the epidermis and its appendages (containing, *e.g.*, psoriasis, alopecia areata, hyperidrosis, carcinoma and pemphigus).

8. Chorioblasts—anomalous growths of the corium and of the subcutaneous connective tissue (containing, *e.g.*, lupus, syphiloderma, lipoma, and striæ atrophical cutis).

9. Dermato-mycoses—containing the skin-diseases produced by the vegetable parasites.

This short sketch will suffice to show that Professor Ausspitz's classification is based on a different principle from those with which books on dermatology have made us familiar, and will partially indicate its chief features. The interest of the book lies in the exhaustive criticisms and acute speculations by which the classification is sought to be justified.

The Alkaloid Jaborine.

This is a new alkaloid derived from jaborandi by Drs. Harnach and Meyers, an account of which appears in our chemical exchanges. They state that pilocarpine is in its physiological effects analogous to nicotine, while the effects of jaborine they found to be identical with those of atropine. The separation of jaborine and pilocarpine is based upon their different degrees of solubility in various menstrua, the separation being facilitated by the non-crystallizable property of the jaborine compounds.

The presence of jaborine in commercial pilocarpine was indicated by the action of the latter upon a frog, traces of jaborine causing spasms of the heart. Pure pilocarpine the authors found to contain no jaborine. After having, by means of its physiological effects, determined the presence of jaborine in commercial pilocarpine, the authors set to work to prepare it in at least sufficient quantity to enable them to experiment upon it. The raw materials selected for this purpose consisted in part of jaborandi leaves and partly of the so-called false jaborandi, piper reticulatum, and other kinds of pepper.

Jaborine is a very strong base, differing from pilocarpine by being difficultly soluble in water and easily soluble in ether. Its salts dissolve readily in water and alcohol, and are not crystallizable.

Elephantiasis in the Samoan Islands.

A consular report from Samoa to our government states that the Rev. George W. Turner, M.D., eleven years a missionary at Samoa, has in that time operated on one hundred and forty cases of *elephantiasis* affecting the testicles. In some cases both of the glands were saved; in

others one or both were removed, the latter cases being those where the enlargement was solid. In one instance the organs and parts removed weighed ninety pounds. The disease does not generally interfere with the daily avocations of the patient, unless he is disabled by extensive ulceration, or the occasional attacks of chill and fever which are observed in leprosy. Foreigners may sometimes remain in the islands for many years without being affected, but most of them are attacked within a few months after their arrival. Consumption is not rare, and usually assumes a very rapid form. Venereal diseases are found, but are not prevalent in their worst degrees.

Texas or Splenic Fever.

This disease has been unusually prevalent this autumn in the Western States, and cases have been found near Philadelphia and New York. Several bullocks exported to England have also died with its characteristic symptoms. A conflict of opinion prevails as to whether the flesh of such animals is injurious. It is an important point, which ought to be carefully investigated.

Correspondence.

Cirrhosis of the Liver in an Imbecile Patient Sixteen Years Old.

Ed. Med. and Surg. Reporter:—

Some time ago I assisted at the autopsy of a case that was of interest to me, and hoping it may not be without interest to many of the profession, I send you a report of the case.

On the 24th of last January I was called to Koszta, a neighboring town, in consultation with Dr. Dodd, of that place. After seeing our patient, he asked me to go across the street and see another case that was giving him some trouble. On our way over he gave me the history, which was about as follows:—

Frank F., a strong, muscular lad of sixteen years, mentally little better than an idiot, for some time has had a ravenous appetite; usually eats as much at one meal as an ordinary man will at three, and after suffering an hour or two, will disgorge a gallon or more undigested food. Has a persistent cough and palpitation of the heart. Has had more or less ague all his life.

Found patient lying on a couch complaining of severe pain in the stomach. His brother said he had finished a very large supper about an hour before. Found stomach very greatly distended and tympanitic, crowding the apex of the heart nearly over to the median line, on a level with the fourth interspace, tympanitic stomach reaching as high as the fourth rib and down below umbilicus. He soon vomited a large amount of ingesta, which emitted a sickening odor. This gave him almost complete relief. Now found stomach, heart and lung in place again. Lungs emphysematous, heart enlarged and beating irregularly; spleen perceptibly enlarged.

My diagnosis was dilatation of the stomach, with probable stenosis of the pyloric orifice, emphysema, cardiac hypertrophy and malarial poisoning.

As the patient's imbecility prevented any reform in his diet, I declined to prescribe for him, feeling it would do no good, but requested Dr. Dodd to obtain permission from his friends to allow us to make an examination, in case of his death, which we knew must occur soon. In this he succeeded. On August 22d, seven months after I saw Frank, the Doctor sent me a note, saying he was dead, and requesting me to come up and take charge of the autopsy.

On my arrival the Doctor informed me that about two months before jaundice began to appear, which continued to increase till his death; also complained of pain in right hypochondrium. In a short time general dropsy began to show itself. Soon after an irregular tumor, projecting below the ribs on right side, could be felt. He grew rapidly weaker, and died from exhaustion.

Autopsy 20 hours after death.—Body much emaciated; skin of a dirty yellow-brown color; abdomen distended with gas and small amount of water; slight œdema about ankles; veins perceptible, but not prominent over abdomen. Lungs emphysematous; patches of tuberculous deposit scattered through apex of right. Heart large and fatty; scarcely any muscular structure visible on outside; walls thickened, especially the right side. Liver; the entire organ cirrhosed, presenting the peculiar nodulated appearance; weighed 5½ pounds. Right lobe large and very firmly cirrhosed; left lobe smaller than normal; stomach large and sacculated; capacity of 14 to 16 pints; pyloric orifice just admit passage of lead pencil; walls thickened. Spleen enlarged; weight about 2½ pounds. Left kidney enlarged; right normal. Pancreas small and nodulated, and very broad, presenting an appearance not unlike that of the liver, only nodules smaller and much harder. Did not examine brain.

The most remarkable feature of the case is the existence of cirrhosis of the liver in a lad of his age, 16 years, who had never used any kind of alcoholic drink, never had syphilis, was never troubled with any disease of the liver till two months before his death.

Was it due to continued exposure to malarial poisoning? To his fatty heart, his imbecility, or his dilated stomach? Again, what caused stenosis of pyloric orifice of stomach, that presented no appearance of former ulceration or inflammation.

D. C. Brockman, M. D.

Marengo, Iowa, Nov. 5th, 1880.

Consciousness.

Ed. Med. and Surg. Reporter:—

I have read with much interest Dr. Hurd's courteous note in your journal of Oct. 9th, in response to my communication on the "Evolution of Consciousness." The argument is an old one, but none the less able for that, and upon

purely ethical grounds might, at first glance, seem to be conclusive. Dialectically, the doctor has well spoken, although the deductions from his premises I hold to be unsound, since I cannot admit the truth of the premises themselves. A great and ultimate good must eventually result from this polite interchange of opinion, and from out the darkness we may find our way to the light in an intellectual discussion of the matter. In the beginning, there must have existed amorphous matter. Sentience could hardly evolve itself, unless it be granted that sentient molecules have always been, and were the primary factors of conscious creations. If amorphous matter *did* forerun subsequent sentience, can science bridge over the chasm between that condition of inertness and of sentience? Evolution through successive æons of time may explain forms, and differentiate between them—but how does it account for that vital creative act from amorphous protoplasm to sentience? From amorphous protoplasm, successive grades of amorphous protoplasm may be evolved; but sentience can only be evolved from sentience itself. Again, I hold it to be proven that the form of consciousness which the doctor apportions to lower animals is an automatic obedience to the unalterable impressions of heredity, and which may exist equally in the spinal cord, hind and fore brain. Ducks deprived of their cerebral lobes will swim regularly, though they may never before have been in water. The location of the conscious principle was a matter of considerable concern to Hippocrates, Hierophilus, Democritus, Strabo, Diogenes, Chrysippus, Plato, and Aristotle, and modern thinkers have done but little to elucidate the question.

HORATIO A. BIGELOW, M. D.

Washington, D. C.

NEWS AND MISCELLANY.

The International Sanitary Conference.

Our readers will no doubt remember that on the 30th of July last a circular was sent by Secretary Evarts to our representatives at foreign courts, proposing an International Sanitary Conference, to meet at Washington, to which the several powers having jurisdiction of ports likely to be infected with yellow fever or cholera were invited to send delegates, properly authorized, for the purpose of securing an international system of notification as to the actual sanitary condition of ports and places under the jurisdiction of such powers, and of vessels sailing therefrom. This resolution had its origin in the practical difficulties which have been encountered in the administration of the regulations and rules recommended by sanitary experience and framed by the legislation of the country, for the purpose of preventing the introduction and spread of yellow fever, cholera, and other contagious or infectious diseases in the territory of the United States, etc.

The date of holding this Conference was suggested to be January 1, 1881.

The following are the propositions which will be submitted to the Conference:—

A. The establishment of a reliable and satisfactory international system of notification as to the existence of contagious and infectious diseases, more especially cholera and yellow fever.

B. The establishment of a uniform and satisfactory system of bills of health, the statements in which shall be trustworthy as to the sanitary condition of the port of departure and as to the condition of the vessel at the time of sailing.

The discussion of these points involves, among others, the following questions:—

I. Who should be the certifying officer or authority as to the sanitary condition of ports and places and of vessels?

II. How can the certifying authority obtain trustworthy information as to the actual sanitary condition of ports and places and as to the presence of contagious and infectious diseases?

III. When yellow fever or cholera exists at or in the vicinity of a port or place, what examination should be made of a vessel sailing therefrom, to secure a trustworthy knowledge of her sanitary condition?

IV. To what extent, and under what conditions, should a clean bill of health be considered as affording satisfactory evidence that the vessel is free from danger of conveying infectious disease?

V. In what way can trustworthy information be obtained from ports or places in countries which have imperfect or unsafe quarantine and sanitary regulations, and which may be unwilling or unable to adhere to the proposed international system?

VI. Whether a schedule of graduated penalties could be fixed, to be exacted from vessels for various offences arising under the proposed international system?

A Healthy Place.

From Flushing, Netherlands, the United States Consul, P. Smith, under date of September 30, writes, that during the months of August and September "a few people died of ordinary sickness," but there was so little sickness that the apothecaries were taking a general vacation, in the absence of business. The military surgeon reports the same healthy condition among the troops in garrison, only seven cases of slight sickness occurring in three weeks, among 760 men.

The Iowa State University.

The Medical Department of the Iowa State University opened with one hundred and eighty students, which is quite an increase over other years. From a calculation made from the catalogues of medical schools for several years, it appears that there are two hundred medical students, on an average, from Iowa, each year. Less than half take a second course or graduate.

Yellow Fever at Key West.

Assistant Surgeon John Y. Porter, United States Army, advises the National Board of Health, under date of November 9th, that from

the 3d to the 8th inst., there had been ten cases of yellow fever and two deaths, at Key West. Similar advices were to-day received by the Marine Hospital Bureau. The latter report states that one of the deaths was Episcopal Clergyman Gilbert, and that one case called pernicious fever resulted fatally on the 10th inst., and, further, that there are some cases occurring outside of the city limits which have not yet been reported.

Items.

—The epizooty in Montreal is increasing in severity, owing to unfavorable weather.

—"Dr." John Buchanan pleaded guilty, in the Court of Quarter Sessions, to two charges of selling an academic degree. Sentence was deferred.

—The New York State Board of Health, at Albany, has adopted resolutions urging the importance of vaccination, to prevent the spread of smallpox. The Board appointed Hon. Erastus Brooks and Dr. Harris delegates to the American Public Health Association, to meet in New Orleans on December 7th.

—The odors of Paris have been worse than ever this summer and autumn. One of the comic papers there represents a country gentleman in the act of inhaling the emanations from a heap of manure. "What are you doing there, papa?" asks the son. "Going into training for a visit to Paris," is the reply.

OBITUARY NOTICES.

ALEXANDER WILCOCKS, M.D., died, Nov. 17th, in this city, of hepatitis. He was born here in 1817, and graduated from Jefferson Medical College in 1844. He had been in delicate health for some years, and traveled extensively for a restoration of strength, with only temporary benefit. His contributions to literature were: Essays on the Tides; Theory of the Two Forces; Reflections Upon the Nature of the Temporary Star of the Year 1572; An Application of the Nebular Hypothesis; Thoughts on the Influence of Ether in the Solar System; its Relations to the Zodiacal Light, Comets, the Seasons, and Periodical Shooting Stars. Also, papers, in the American Examiner, 1845, and American Journal of Medical Science, 1847. He was a member of the Academy of Natural Sciences, Philosophic Society, Historical Society, and Photographic Society. He was very fond of photography at one time, and pursued this study with considerable diligence, as a source of amusement and for his own gratification. He offered his services to attend to the wounded in the battle of Bull Run, and was attached to the medical corps at Fortress Monroe for a time. His health, however, soon broke down, and he was compelled to return to his home.

COPPEDGE.—August 1st, 1880, Dr. C. P. Coppedge, of Wadesboro, North Carolina. Dr. Coppedge had been a practitioner of medicine in Anson county for 33 years, and was a graduate of the Medical Department of the University of the City of New York. At a meeting of the Medical Association of Anson County, resolutions were adopted expressing the regrets of the Society and sympathy with his family.

QUERIES AND REPLIES.

Dr. J. H., of Ohio.—The formula at present used to make Churchill's tincture of iodine is—

R.	Iodinii,	gr. lxxx.
	Potass. iodidi.,	ʒ iss
	Alcoholis,	ʒ j M.

Dr. T. H. P., of Pa.—Curaçoa is a liqueur of agreeable flavor, originally manufactured in the colony of that name.

Dr. T. H. F., of Cal.—1. Rubber underwear was recommended by Hebra in some skin diseases. 2. The series of articles you refer to cannot be obtained in the stores here. You might apply directly to the authors.

MARRIAGES.

BELLVILLE—ASH.—At Delaware City, Oct. 27th, by Rev. J. Bellville, D.D., Dr. Frank Bellville and Emma L. Ash, both of Delaware City.

BRANCH—BURBANK.—In Coventry, Vt., Oct. 31st, by Rev. W. C. Somerville, Charles F. Branch, M. D., and Ida H. Burbank, both of Coventry.

BREWSTER—STOUGH.—Oct. 27th, by Rev. E. E. Erskine, D.D., Dr. W. C. Brewster and Lolla M. Stough, all of Newville, Pa.

CUTTER—PRINCE.—On Wednesday evening, Nov. 10th, at the residence of the bride's parents, Flatbush, Long Island, by the Rev. C. L. Wells, D.D., Dr. George R. Cutter, of New York City, and Esther J. daughter of John D. Prince, Esq.

HELMAN—ROCKWOOD.—Thursday evening, October 28, at the Fifth Presbyterian Church, by the Rev. A. B. Morey, Dr. C. S. Helman and Miss A. J. Rockwood, all of Cincinnati, O.

HILL—LOUGHRIDGE.—Oct. 20th, by Rev. R. B. Farrar, assisted by Rev. J. Rossell, Dr. T. Benton Hill, of Ruff's Creek, Pa., and Miss Metta W. Loughridge, of Ryerson's Station, Greene Co., Pa.

POWNALL—WALTER.—In Philadelphia, at the St. Cloud Hotel, on Nov. 4th, 1880, in the presence of Mayor Stokley, by Friends' Ceremony, Dr. H. W. Pownall, of Atglen, Chester County, Pa., and H. Louisa Walter, of Christiana, Lancaster County.

STOCKDILL—GOURLEY.—October 21st, 1880, by Rev. J. Horner Kerr, assisted by Rev. W. S. Cummings, at the home of the bride's parents, T. F. Stockdill, M.D., and Miss Nettie Gourley, all of Rural Village, Armstrong Co., Pa.

DEATHS.

COLVIN.—Of diphtheria, in Burlington Vt., Sunday afternoon, Nov. 7th, Dr. Albert Colvin.

DUCK.—In this city, on Friday morning, the 12th inst., at 1933 Chestnut street, C. H. Duck, M.D., in the 62d year of his age.

HODGMAN.—In New York, Nov. 2, Martha Eugenia, wife of Abbot Hodgman, M.D., and daughter of the late Joseph Kean.

SATTERLEE.—At his residence, in New York, Wednesday, Nov. 10, 1880, Richard S. Satterlee, M.D., Brevet Brigadier-General United States Army, in the 82d year of his age.

SEGUIN.—In New York, on Oct. 28th, in the 69th year of his age, Edouard Seguin, M.D.

SHELLY.—On the 9th inst., Elizabeth S., wife of Dr. A. F. Shelly, and daughter of the late Rev. J. A. Strassburger, in her 55th year.

THOMAS.—Suddenly, October 10th, at 10.30 P. M., at his residence, No. 14 West Fourth street, Covington, Ky., of apoplexy, Dr. Charles F. Thomas, in the 59th year of his age.

WILCOCKS.—In Philadelphia, on Nov. 10th, Alexander Wilcocks, M.D., in his 64th year.